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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,677	11/29/2001	Masaki Nakamichi	Q66518	1015

7590 09/11/2003

SUGHRUE, MION, ZINN, MACPEAK & SEAS
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037

EXAMINER

OLSEN, KAJ K

ART UNIT	PAPER NUMBER
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1753

DATE MAILED: 09/11/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/995,677

Applicant(s)

NAKAMICHI ET AL.

Examiner

Kaj Olsen

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 03 September 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attached.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: 1-10.

Claim(s) withdrawn from consideration: _____.

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

DETAILED ACTION***Response to Arguments***

1. Applicant's arguments filed 9-3-2003 have been fully considered but they are not persuasive. With respect to the rejection utilizing the combination of Jung and Sagisaka, applicant urges that the examiner has not dealt with limitation requiring that "fuel is not injection when the O₂-sensor is in the inactive state". It would appear that the applicant has misunderstood the rejection and the examiner will now further clarify the current office position. In particular, Jung attempts to diagnose the fault by increasing the concentration of fuel in the exhaust gas and monitoring any change in the sensor response (col. 3, line 35 through col. 4, line 6). The applicant has correctly pointed out that Jung does not teach the above quoted limitation of the present invention. However, as the examiner has attempted to point out with the teaching of Sagisaka, other means for diagnosing a sensor fault are known in the art. One known means is to monitor the internal resistance of the sensor itself and utilize that to determine whether there is a sensor fault. This particular means for the diagnosing of a fault requires the fuel to be cut during the operation (col. 9, lines 37-40). On this point applicant urges that the cited passage from Sagisaka only relates to whether another diagnosis routine has been performed prior to the diagnosis routine in question. The examiner does not believe the applicant is correct here. There is no diagnosis routine in Sagisaka known as a "fuel-cut operation". The term "fuel-cut operation" means exactly what it says, namely that the fuel must be cut before the performance of the sensor resistance measurement or it will not be performed (see fig. 8). Similarly, the other steps 301-306 in figure 8 of Sagisaka are also not diagnosis routines per se, but conditions that have to be met before successful determination of the sensor resistance can be made. The

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examiner presumes the reason the fuel needs to be cut is so the sensor response is stable during the performance of the diagnosis. If the air to fuel ratio is varying during the operation (as it would under normal fuel injection operation), then the measured current levels would also vary throwing off the resistance calculation. For this reason, the examiner is of the opinion that the teachings of Jung and Sagisaka as set forth in the previous office action render obvious claims 1, 3-5 and 7-9.

2. With respect to the rejection of claims 2, 6 and 10, applicant's traversal depends on their view that Jung and Sagisaka did not rendered obvious claims 1 and 5. Because the examiner did not find arguments concerning claims 1 and 5 persuasive (see above), claims 2, 6 and 10 remain rejected over the further teaching of Nakamichi.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaj Olsen whose telephone number is (703) 305-0506. The examiner can normally be reached on Monday through Thursday from 7:00 AM-4:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Mr. Nam Nguyen, can be reached at (703) 308-3322.

When filing a fax in Group 1700, please indicate in the header "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communications with the PTO that are not for entry into the file of this application. This will expedite processing of your papers. The fax number for regular communications is (703) 305-3599 and the fax number form after-final communications is (703) 305-5408.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to read 'Kaj K. Olsen', with a long horizontal flourish extending to the right.

Kaj K. Olsen

Patent Examiner

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September 11, 2003